Edward Vasicek
Lippert Tire and Axle, Inc.
2375 Tamiami Trail North, Suite 100
Naples, Florida 34103

Re: Registered Construction and Operation Status,
039-13616-00475

Dear Mr. Vasicek:

The application from Lippert Tire and Axle, Inc., received on December 15, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following trailer axle manufacturing and coating source, located at 2275 Bloomingdale Drive, Bristol, Indiana, is classified as registered:

(a) Two (2) furnaces, identified as H1 and H2, firing natural gas, rated at 0.150 million British thermal units per hour, each.

(b) Two (2) furnaces, identified as H3 and H4, firing natural gas, rated at 0.125 million British thermal units per hour, each.

(c) Eight (8) welding stations, capacity: 4,500 pounds of metal axles per hour, total.

(d) Aerosol spray painting operations, capacity: 0.176 gallons of paint per hour.

(e) One (1) paint booth, identified as EU-01A, using high volume, low pressure (HVLP) spray equipment, equipped with dry filters, exhausting to Stack S-1, capacity: 65.6 axles per hour.

(f) One (1) flowcoat booth, identified as EU-01B, capacity: 55 axles per hour.

(g) One (1) flowcoat booth, identified as EU-01C, capacity: 55 axles per hour.

The following conditions shall be applicable:

(a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) paint booth, identified as EU-01A, and the aerosol spray painting operations, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the one (1) paint booth, identified as EU-01A is in operation, in order to comply with this limit.

(c) The particulate matter (PM) from the eight (8) welding stations shall not exceed 7.06 pounds per hour when operating at a process weight rate of 4,500 pounds per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(d) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the one (1) paint booth (EU-01A), and the two (2) flowcoat booths (EU-01B and EU-01C), shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the one (1) paint booth (EU-01A), and the two (2) flowcoat booths (EU-01B and EU-01C) are in compliance with this requirement.

(e) Any change or modification which may increase the actual VOC emissions from the aerosol spray painting operations to fifteen (15) pounds per day or more shall make the aerosol spray painting operations subject to 326 IAC 8-2-9, and shall require approval from IDEM, OAQ prior to making the change.

(f) Any change or modification which would increase the potential to emit of a single HAP or a combination of HAPs to ten (10) tons per year or more or twenty-five (25) tons per year or more, respectively, shall obtain prior approval from IDEM, OAQ.

This registration is a revised registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

EAL/MES

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Greg Wingstrom
Northern Regional Office
Permit Tracking - Janet Mobley
Air Programs Section- Michele Boner

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	**Lippert Tire and Axle, Inc.**
Address:	**2275 Bloomingdale Drive**
City:	**Bristol**
Authorized individual:	**Edward Vasicek**
Phone #:	**941 - 659 - 2005**
Registration #:	**039-13616-00475**

I hereby certify that Lippert Tire and Axle, Inc. is still in operation and is in compliance with the requirements of Registration **039-13616-00475**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	**Lippert Tire and Axle, Inc.**
Source Location:	**2275 Bloomingdale Drive, Bristol, Indiana 46570**
County:	**Elkhart**
SIC Code:	**3714, 3792**
Operation Permit No.:	**039-13616-00475**
Permit Reviewer:	**Edward A. Longenberger**

The Office of Air Quality (OAQ) has reviewed an application from Lippert Tire and Axle, Inc. relating to the construction and operation of a trailer axle manufacturing and coating source.

History

This source was previously known as Pritt Tire and Axle, and was issued an Exemption (CP 039-9058-00475) on November 13, 1997. The source is now known as Lippert Tire and Axle, Inc.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Two (2) furnaces, identified as H1 and H2, firing natural gas, rated at 0.150 million British thermal units per hour, each.

(b) Two (2) furnaces, identified as H3 and H4, firing natural gas, rated at 0.125 million British thermal units per hour, each.

(c) Eight (8) welding stations, capacity: 4,500 pounds of metal axles per hour, total.

(d) Aerosol spray painting operations, capacity: 0.176 gallons of paint per hour.

(e) One (1) paint booth, identified as EU-01A, using high volume, low pressure (HVLP) spray equipment, equipped with dry filters, exhausting to Stack S-1, capacity: 65.6 axles per hour.

(f) One (1) flowcoat booth, identified as EU-01B, capacity: 55 axles per hour.

The one (1) paint booth, identified as EU-01A, was specifically exempted in CP 039-9058-00475. The other emissions units listed in this section operate at exemption levels, so they have not been classified as unpermitted.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

(g) One (1) flowcoat booth, identified as EU-01C, capacity: 55 axles per hour.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

CP 039-9058-00475, issued on November 13, 1997.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S1	Paint Booth	31	2.5	12,000	70

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 15, 2000, with additional information received on January 19, 2001 and May 7, 2001.

Emission Calculations

See Pages 1 through 5 of 5 of Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	24.2
PM_{10}	24.2
SO_2	0.001
VOC	21.7
CO	0.202
NO_X	0.241

HAPs	Potential To Emit (tons/year)
Glycol Ethers	9.97
Xylene	0.238
Ethyl benzene	0.048
Benzene	0.005
Dichlorobenzene	0.000003
Formaldehyde	0.0002
Hexane	0.004
Toluene	0.954
Lead Compounds	0.000001
Cadmium Compounds	0.000003
Chromium Compounds	0.000003
Manganese Compounds	0.0000009
Nickel Compounds	0.000005
TOTAL	11.2

The potential to emit (as defined in 326 IAC 2-5.1-2) of PM and PM_{10} are less than twenty-five (25) tons per year and greater than five (5) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPS**
Paint Booth (EU-01A)	21.2	21.2	0.00	4.13	0.00	0.00	0.00
Flowcoaters (EU-01B and EU-01C)	0.00	0.00	0.00	13.5	0.00	0.00	9.97
Marking Paint	0.358	0.358	0.00	4.05	0.00	0.00	0.954/1.25
Natural Gas Combustion	0.005	0.018	0.001	0.013	0.202	0.241	0.004/0.005
Eight Welding Stations	2.62	2.62	0.00	0.00	0.00	0.00	0.004/0.005
Total Emissions	24.2	24.2	0.001	21.7	0.202	0.241	9.97/11.2

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_X) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	3.16
PM_{10}	3.18
SO_2	0.001
VOC	8.57
CO	0.202
NO_X	0.241

(a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the calculations in Appendix A of this document.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM_{10} (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_X (ton/yr)
Proposed Modification	0.00	0.00	0.00	13.2	0.00	0.00
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit (039-13616-00475), is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than one hundred (100) tons per year,

(b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and

(c) any combination of HAPS is less than twenty-five (25) tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Parts 61, 62 and 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-4.1-1 (New Source Toxics Control)

This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments. Therefore, 326 IAC 2-4.1-1 is not applicable.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Elkhart County and it has the potential to emit more than ten (10) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

(a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) paint booth, identified as EU-01A, and the aerosol spray painting operations, shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the one (1) paint booth, identified as EU-01A is in operation, in order to comply with this limit.

(b) The particulate matter (PM) from the eight (8) welding stations shall not exceed 7.06 pounds per hour when operating at a process weight rate of 4,500 pounds per hour.

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The PM emissions from the eight (8) welding stations are 0.598 pounds per hour which is less than the allowable PM emission rate of 7.06 pounds per hour. Therefore, the eight (8) welding stations are in compliance with this rule.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the one (1) paint booth (EU-01A), and the two (2) flowcoat booths (EU-01B and EU-01C), shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the one (1) paint booth (EU-01A), and the two (2) flowcoat booths (EU-01B and EU-01C) are in compliance with this requirement.

(b) Since the actual VOC emissions from the aerosol marking paint are less than fifteen (15) pounds per day, the requirements of 326 IAC 8-2-9 are not applicable. Any change or modification that would increase actual VOC emissions from the aerosol spray painting operations to fifteen (15) pounds per day or more will require prior approval from IDEM, OAQ.

Conclusion

The construction and operation of this trailer axle manufacturing and coating source shall be subject to the conditions of the attached proposed Registration No.: 039-13616-00475.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Lippert Tire and Axle, Inc.
Address City IN Zip: 2275 Bloomingdale Drive, Bristol, Indiana 46570
Registration: 039-13616
Plt ID: 039-00475
Reviewer: Edward A. Longenberger
Date: December 15, 2000

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
Paint Booth (EU-01A)																
6437	8.40	56.00%	53.00%	3.00%	60.99%	42.00%	0.05700	65.63	0.65	0.25	0.94	22.63	4.13	21.20	0.60	65%
Flowcoater (EU-01B)																
6474	8.58	77.00%	76.50%	0.50%	78.80%	22.70%	0.03600	55.00	0.20	0.04	0.08	2.04	0.37	0.00	0.19	100%
Flowcoater (EU-01C)																
1560	8.71	66.00%	51.00%	15.00%	53.35%	26.00%	0.03600	55.00	2.80	1.31	2.59	62.08	11.33	0.00	5.03	100%
WBS-B	8.20	100.00%	76.83%	23.17%	80.00%	0.00%	0.00400	55.00	9.50	1.90	0.42	10.03	1.83	0.00	ERR	100%
R-T-S	**8.66**	**69.22%**	**53.45%**	**15.77%**	**56.02%**	**23.40%**	**0.04000**	**55.00**	**3.11**	**1.37**	**3.00**	**72.12**	**13.16**	**0.00**	**5.84**	**100%**
Marking Paint																
Aerosol	6.20	85.00%	0.00%	85.00%	0.00%	15.00%	0.00100	175.63	5.27	5.27	0.93	22.21	4.05	0.358	35.13	50%
								PM	Control Efficiency	97.50%					
State Potential Emissions			**Add worst case coating to all solvents**						**Uncontrolled**		**4.96**	**119**	**21.7**	**21.6**		
									Controlled		**4.96**	**119**	**21.7**	**0.539**		

METHODOLOGY

PTE	**Existing Equipment**	**1.95**	**46.9**	**8.56**	**21.6**
PTE	**Proposed Addition**	**3.00**	**72.1**	**13.2**	**0.00**
PTE	**Total**	**4.96**	**119**	**21.7**	**21.6**

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Lippert Tire and Axle, Inc.
Address City IN Zip: 2275 Bloomingdale Drive, Bristol, Indiana 46570
Registration: 039-13616
Plt ID: 039-00475
Reviewer: Edward A. Longenberger
Date: December 15, 2000

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Benzene	Weight % Ethylbenzene	Weight % Glycol Ethers	Xylene Emissions (tons/yr)	Toluene Emissions (tons/yr)	Benzene Emissions (tons/yr)	Ethylbenzene Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)
Flowcoater (EU-01C)													
1560	8.71	0.03600	55.00	0.00%	0.00%	0.00%	0.00%	11.00%	0.00	0.00	0.00	0.00	8.31
WBS-B	8.20	0.00400	55.00	0.00%	0.00%	0.00%	0.00%	21.00%	0.00	0.00	0.00	0.00	1.66
Marking Paint													
Aerosol	6.20	0.00100	175.63	5.00%	20.00%	0.10%	1.00%	0.00%	0.238	0.954	0.005	0.048	0.00
								Individual Total	**0.238**	**0.954**	**0.005**	**0.048**	**9.97**
METHODOLOGY								**Overall Total**	**11.2**				

HAPS emission rate (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Welding and Thermal Cutting

Company Name: **Lippert Tire and Axle, Inc.**
Address City IN Zip: **2275 Bloomingdale Drive, Bristol, Indiana 46570**
Registration: **039-13616**
Plt ID: **039-00475**
Reviewer: **Edward A. Longenberger**
Date: **December 15, 2000**

PROCESS WELDING	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS * (lb pollutant / lb electrode) PM = PM10	Mn	Ni	Cr	EMISSIONS (lb/hr) PM = PM10	Mn	Ni	Cr	TOTAL HAPS (lb/hr)
Submerged Arc	0	0		0.036				0.000	0	0.000	0	0.000
Metal Inert Gas (MIG)(ER5154)	8	3.1		0.0241	0.00003		0.00001	0.598	0.0008432	0.000	0.000248	0.001
Stick (E7018 electrode)	0	0		0.0211				0.000	0	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	0	0		0.0055				0.000	0	0.000	0	0.000
Oxyacetylene(carbon steel)	0	0		0.0055				0.000	0	0.000	0	0.000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick) PM = PM10	Mn	Ni	Cr	EMISSIONS (lbs/hr) PM = PM10	Mn	Ni	Cr	TOTAL HAPS (lb/hr)
Oxyacetylene	0	0	0	0.1622	0.0005	0.0001	0.0003	0.000	0.000	0.000	0.000	0.000
Oxymethane	0	0	0	0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma	0	0	0					0.000	0.000	0.000	0.000	0.000
EMISSION TOTALS								PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr								0.598	0.0008	0.00	0.0002	0.001
Potential Emissions lbs/day								14.3	0.020	0.00	0.006	0.026
Potential Emissions tons/year								**2.62**	0.004	0.00	0.001	0.005

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.
Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).
Welding and other flame cutting emission factors are from an internal training session document.
See AP-42, Chapter 12.19 for additional emission factors for welding.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Lippert Tire and Axle, Inc.**
Address City IN Zip: **2275 Bloomingdale Drive, Bristol, Indiana 46570**
Registration: **039-13616**
Plt ID: **039-00475**
Reviewer: **Edward A. Longenberger**
Date: **December 15, 2000**

Unit ID	Capacity
H1	0.15
H2	0.15
H3	0.125
H4	0.125
Total	**0.55**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.55	4.82

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.005	0.018	0.001	0.241	0.013	0.202

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 5 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: Lippert Tire and Axle, Inc.
Address City IN Zip: 2275 Bloomingdale Drive, Bristol, Indiana 46570
Registration: 039-13616
Plt ID: 039-00475
Reviewer: Edward A. Longenberger
Date: December 15, 2000

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.059E-06	2.891E-06	1.807E-04	4.336E-03	8.191E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	HAPs
Potential Emission in tons/yr	1.205E-06	2.650E-06	3.373E-06	9.154E-07	5.059E-06	0.005

Methodology is the same as page 4.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.